

REMARKS/ARGUMENTS

In view of the foregoing amendments and the following remarks, the applicants respectfully submit that the pending claims comply with 35 U.S.C. § 112, recite statutory subject matter under 35 U.S.C. § 101, and are not rendered obvious under 35 U.S.C. § 103. Accordingly, it is believed that this application is in condition for allowance. **If, however, the Examiner believes that there are any unresolved issues, or believes that some or all of the claims are not in condition for allowance, the applicants respectfully request that the Examiner contact the undersigned to schedule a telephone Examiner Interview before any further actions on the merits.**

The applicants will now address each of the issues raised in the outstanding Office Action. Before doing so, however, the undersigned would like to thank the Examiner and her primary for courtesies extended during the telephone interview on November 17, 2004 (referred to below as "the telephone interview").

REJECTIONS UNDER 35 U.S.C. § 112

Claim 3 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Claim 3 recites a method that may be used to match a phrase with its acronym, for example, "Food & Drug

Administration" and "FDA". An exemplary method for making such a match determination is described on page 12, lines 8-17 of the present application for example. This exemplary method serves to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the application was filed. In view of the foregoing, this ground of rejection should be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 101

Claims 1-24 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. The applicants respectfully request that the Examiner reconsider this ground of rejection in view of the foregoing amendments and the following remarks.

The Examiner contends that the claimed invention is "a conceptual description of a method or means, as distinct, for instance from a computer implemented method or means." (Paper No. 2, page 3.) Since the method claims have been amended to recite that the claims are drawn to a "computer-implemented method", and since the apparatus claims either recite means-plus-function elements or physical elements, they are statutory. During the telephone interview, the Primary Examiner indicated that such amendments would obviate the rejection of the claims under 35 U.S.C. § 101. Accordingly, this ground of rejection should be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 103

Claims 1, 2, 4-6, 9, 13, 15-20, 24 and 25

Claims 1, 2, 4-6, 9, 13, 15-20, 24 and 25 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,404,514 ("the Kageneck patent") in view of U.S. Patent No. 5,488,725 ("the Turtle patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Before addressing the rejection of the claims, the Kageneck and Turtle patents are introduced. The Kageneck patent concerns finding additional and/or alternative keywords for a document search. The suggestions are based on the content of the documents being searched, not on past search queries. More specifically, the documents being searched are analyzed to find co-occurring words. During the telephone interview, the Primary Examiner agreed that the Kageneck patent was different from the present invention.

The Turtle patent describes a so-called "probabilistic" search system, such as Bayesian inference networks. Such probabilistic search systems differ from Boolean search systems. In such search systems, it is important to identify the frequency of the occurrence of a representation in a document and across a collection of documents. (See, e.g., column 3, lines 8-11.) Unfortunately, this is difficult for large document collections. (See, e.g., column 3, lines 41-46.) The Turtle patent proposes a solution where the frequency of the occurrence of a representation in a set of documents

is estimated by taking a sample, and taking the midpoint of a probable maximum and minimum occurrence frequencies in the sample. (See, e.g., column 5, lines 10-18, and column 15, line 56 through column 16, line 50.) If, however, the variance between the minimum and maximum probabilities is too large, the size of the sample is increased and the process is repeated. (See, e.g., column 5, lines 19-37, and column 16, lines 51-56.) Although the Turtle patent mentions considering synonyms or other equivalent words, these are provided from a predefined database stored in ROM. (See, e.g., column 13, lines 13-23.) During the telephone interview, the Primary Examiner agreed with this interpretation of the Turtle patent.

Having introduced the Kagenack and Turtle patents, at least some of the patentable features of at least some of the claims are now discussed.

Independent claims 1, 9, 17, 24 and 25 are not rendered obvious by the Kagenack and Turtle patents because these patents, either taken alone or in combination, neither teach, nor suggest, identifying a list of queries (or a plurality of descriptions) issued by one or more users, identifying a candidate pair of equivalent descriptions by locating two queries (or two descriptions) that refer to the same information need, and calculating a score for the candidate pair dependent on the frequency with which the candidate pair occurs in the list. Further, one skilled in the art would not have been motivated to combine the Kagenack and Turtle patents as proposed by the Examiner. These claims, as amended, are reprinted below with the above-referenced features depicted in bold typeface:

1. A computer-implemented method for determining equivalent descriptions for an information need, comprising:

identifying a list of queries issued by one or more users;

identifying a candidate pair of equivalent descriptions by locating two queries that refer to the same information need;

calculating a score for the candidate pair dependent on the frequency with which the candidate pair occurs in the list; and

determining that each half of the candidate pair is an equivalent description for the information need if the score calculated for the candidate pair is above a defined threshold value. [Emphasis added.]

9. The computer-implemented method for determining equivalent descriptions for an information need, comprising:

identifying a plurality of descriptions that are associated with a plurality of information needs;

identifying a candidate pair of equivalent descriptions by locating two descriptions that refer to the same information need;

calculating a score for the candidate pair dependent on the frequency with which the candidate pair occurs in the plurality of descriptions; and

determining that each of the candidate pair is an equivalent description for the information need if the score is above a defined threshold. [Emphasis added.]

17. A computer-implemented method for determining synonyms, comprising:
 obtaining a list of search queries issued by one or more users;
 sorting the list first by user and second by the time when the query was issued;
 selecting a set of adjacent queries for a single user;
 identifying, from the set, two queries that contain at least one query term in common;
 identifying as a candidate synonym pair the uncommon portions of the two queries;
 calculating a score for candidate synonym pair dependent on the frequency with which the candidate synonym pair occurs in the list; and
 determining that each half of the candidate synonym pair is a synonym of the other half if the score is above a defined threshold.
[Emphasis added.]

24. An apparatus for determining equivalent descriptions for an information need, comprising:
 means for identifying a list of queries issued by one or more users;
 means for identifying a candidate pair of equivalent descriptions by locating two queries that refer to the same information need;
 means for calculating a score for the candidate pair dependent on the frequency with which the candidate pair occurs in the list;
 and
 means for determining that each half of the candidate pair is an equivalent description for the information need if the score id

above a defined threshold. [Emphasis added.]

25. An apparatus for determining equivalent descriptions for an information need, comprising:

at least one memory having program instructions, and

at least one processor configured to execute the program instructions to perform the operations of:

identifying a list of queries issued by one or more users;

identifying a candidate pair of equivalent descriptions by locating two queries that refer to the same information need;

calculating a score for the candidate pair dependent in the frequency with which the candidate pair occurs in the list; and

determining that each half of the candidate pair is an equivalent description for the information need if the score is above a defined threshold. [Emphasis added.]

Independent claims 1, 9, 17, 24 and 25 are not rendered obvious by the Kageneck and Turtle patents because these patents, either taken alone or in combination, neither teach, nor suggest, identifying a list of queries (or a plurality of descriptions) issued by one or more users, and identifying a candidate pair of equivalent descriptions by locating two queries (or two descriptions) that refer to the same information need. With respect to claims 1 and 24, the Examiner contends that the Kageneck patent teaches identifying a list of queries issued by one or more users, citing column 8,

line 42 through column 9, line 30. (See Paper No. 2, page 4.) The Examiner reasoned that although Kagenneck is directed to terms within a single query, a list of query terms act in a search as a list of queries, but the terms can be distinguished from the query in which they appear. (See Paper No. 2, page 4.) The Examiner also contends that the Kagenneck patent teaches calculating a score for a candidate pair dependent on the frequency with which the candidate pair occurs in the list, citing column 2, lines 7-23 of the Kagenneck patent. (See, Paper No. 2, pages 3-4.) However, column 2, lines 7-23 of the Kagenneck patent concerns frequency of the candidate pair **in documents** of a collection being search, **not in the list (of queries)**, which the Examiner defined as terms in a single search query. Accordingly, independent claims 1, 9, 17, 24 and 25 are not rendered obvious by the Kagenneck and Turtle patents for at least this reason. Since claims 2 and 4-6 depend from claim 1, since claims 13, 15 and 16 depend from claim 9, and since claims 18-20 depend from claim 17, these claims are similarly not rendered obvious by the Kagenneck and Turtle patents.

The applicants note that new claims 26 and 27, which depend from claims 1 and 25, respectively, recite that the list of queries is a list of previously submitted search queries. This more clearly distinguishes the claimed invention over the Kagenneck and Turtle patents.

Further, with respect to claim 17, the Examiner concluded that all of the limitations of claim 17 were noted in the rejection of claim 1. (See Paper No. 2, page 5.) The applicants respectfully note that claim 17 includes elements not found in claim 1 and not addressed in the Office Action. For example, claim 17

recites sorting the list first by user and second by the time when the query was issued; selecting a set of adjacent queries for a single user; and identifying, from the set, two queries that contain at least one query term in common. These elements are not recited in claim 1 and were not addressed in the Office Action. Accordingly, the Examiner failed to make a *prima facie* showing of obviousness with respect to claim 17. Accordingly, claim 17 is not rendered obvious by the Kageneck and Turtle patents for at least this additional reason. Since claims 18-20 depend from claim 17 they are similarly not rendered obvious.

Further, with respect to claim 24, the applicants note that the Examiner did not properly interpret the means-plus-function elements. Since claim 24 includes means plus function elements, these elements must be construed under 35 U.S.C. § 112, ¶ 6 as covering "the corresponding structure, material, or acts described in the specification and equivalents thereof." The Examiner impermissibly ignored this structure. As the Court of Appeals for the Federal Circuit has instructed:

The plain and unambiguous meaning of paragraph six is that one construing means-plus-function language in a claim must look to the specification and interpret that language in light of the corresponding structure, material, or acts described therein, and equivalents thereof, to the extent that the specification provides such disclosure. Paragraph six does not state or even suggest that the PTO is exempt from this mandate, and there is no legislative

history indicating that Congress intended that the PTO should be. 3 Thus, this court must accept the plain and precise language of paragraph six. See Mansell supra; see also Diamond v. Chakrabarty, 447 U.S. 303, 308 [206 USPQ 193] (1980) ("courts 'should not read into the patent laws limitations and conditions which the legislature has not expressed' "), quoting United States v. Dubilier Condenser Corp., 289 U.S. 178, 199 [17 USPQ 154] (1933). Accordingly, ***because no distinction is made in paragraph six between prosecution in the PTO and enforcement in the courts, or between validity and infringement, we hold that paragraph six applies regardless of the context in which the interpretation of means-plus-function language arises, i.e., whether as part of a patentability determination in the PTO or as part of a validity or infringement determination in a court.*** To the extent that In re Lundberg, 244 F.2d 543, 113 USPQ 530 (CCPA 1979), In re Arbeit, 206 F.2d 947, 99 USPQ 123 (CCPA 1953), or any other precedent of this court suggests or holds to the contrary, it is expressly overruled. [Emphasis added.]

In re Donaldson Co. Inc., 29 U.S.P.Q.2d 1845, 1848 (Fed Cir 1994). Accordingly, claim 24 is not anticipated by the Kageneck and Turtle patents for at least this additional reason.

Further, with respect to dependent claims 2 and 13, the Examiner contends that the Turtle patent teaches identifying a candidate pair by (i) locating two queries that include at least one term in common (citing column 17, lines 31-51) and (ii) identifying as a candidate pair

the portions of the two queries that are not in common (citing column 18, lines 36-53). (See, Paper no. 2, page 5.) This is not correct. Column 17, lines 31-51 of the Turtle patent concerns bounding minimum and maximum frequencies. It has nothing to do with locating two queries that include at least one term in common. In fact, this feature makes the Examiner's application of the Kogeneck patent to claim 1 (i.e., that a list of query terms in a query acts as a list of queries) inconsistent with her interpretation of claims 2 and 13. Column 18, lines 36-53 of the Turtle patent concerns determining a "gap size" which is the number of consecutive documents in a sample that don't include a selected topic. The sum of the gaps squared is used to estimate the frequency of the selected concept. (See, e.g., column 16, lines 31-39.) This has nothing to do with identifying as a candidate pair the portions of the two queries that are not in common. Accordingly, claims 2 and 13 are not rendered obvious by the Kogeneck and Turtle patents for at least these additional reasons.

Finally, one skilled in the art would not have been motivated to combine the Kogeneck and Turtle patents as proposed by the Examiner. More specifically, the Turtle patent provides a solution useful in the context of probabilistic search systems. It is believed that the Kogeneck patent is not used in such probabilistic search systems. Accordingly, the claims are not rendered obvious by the Kogeneck and Turtle patents for at least this additional reason.

Claims 3, 14 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Kogeneck patent

in view of the Turtle patent, and further in view of U.S. Patent No. 6,740,981 ("the McGreevy patent"). The applicants respectfully request that the Examiner reconsider and withdraw this ground of rejection in view of the following.

Since claims 3 and 14 depend from claims 1 and 9, respectively, and since the purported teachings of the McGreevy patent fail to compensate for the deficiencies of the Kageneck and Turtle patents with respect to claims 1 and 9, as described above, claims 3 and 14 are not rendered obvious by the Kageneck, Turtle and McGreevy patents for at least this reason.

With respect to claim 23, the Examiner concluded that all of the limitations of claim 23 were noted in the rejections of claims 1 and 2. (See Paper No. 2, page 7.) The applicants respectfully note that claim 23 includes elements not found in claims 1 and 2 and not addressed in the Office Action. For example, claim 23 recites creating a list of anchor text units; determining a subset of the list that refers to the same information need; locating, within a subset of the list, two anchor text units contain at least one term in common; and identifying as a candidate pair of equivalent descriptions the uncommon portions of the two anchor text units. These elements are not recited in claims 1 and 2 and were not addressed in the Office Action. Accordingly, the Examiner failed to make a *prima facie* showing of obviousness with respect to claim 23. Accordingly, claim 23 is not rendered obvious by the Kageneck, Turtle and McGreevy patents for at least this reason.

New Claims

New claims 26 and 27, which depend from claims 1 and 25, respectively, recite that the list of queries is a list of previously submitted search queries. This more clearly distinguishes the claimed invention over the Kageneck and Turtle patents, and in particular, the Examiner's interpretation of the Kageneck patent.

Conclusion

In view of the foregoing amendments and remarks, the applicants respectfully submit that the pending claims are in condition for allowance. Accordingly, the applicants request that the Examiner pass this application to issue.

Respectfully submitted,

December 13, 2004



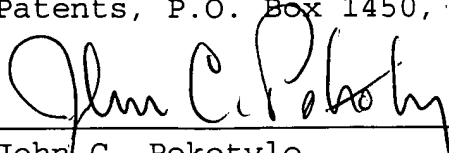
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